Falsely Reported Malaria Parasites in Otherwise Normal Peripheral Blood Smears

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In Iraq the diagnosis of malaria relies only on detection of the parasite in thick blood film and later on determination of its species using thin blood film. Almost always there are no other auxiliary tests. Moreover, the incidence of malaria in Iraq nowadays is very low that no routine training for its morphological detection is available.

In Iraq the incidence of false positive reporting of the presence of malaria parasites in peripheral blood smear of normal people or febrile patients as part of routine diagnosis process or as a quality control check for the hematology laboratory morphology work is a well known phenomenon but no real statistics are available for the local work.

However, problems with this false positive diagnosis of malaria are not only confined to Iraq, as there are 6.0% of 2,744 laboratory reported malaria parasites when none were present by United Kingdom National External Quality Assessment Scheme (NEQAS) surveys [1]. Moreover, as far as we know no explanation can be found in the published literature.

Myeloid cell cytoplasm fragments are perfectly normal findings that have very variable shapes, sizes and granular contents without a specific clinical significance. It is seen mainly in bone marrow smears and less frequently in peripheral blood smears. Unfortunately, in many occasions these fragments were erroneously mixed with the morphological diagnosis of malaria by junior hematologists who are usually performing the routine work [2]. This can be an important explanation for the falsely reported malaria parasites in otherwise normal peripheral blood smears.

References

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